

**TECHNICAL EDUCATION QUALITY IMPROVEMENT  
PROGRAMME**

**(TEQIP)**

**PHASE-II**

**INSTITUTIONAL DEVELOPMENT PROPOSAL**



**For**

**Sub-component 1.1: Strengthening Institutions to improve  
Learning**

**Outcomes and employability of Graduates**

**GOVERNMENT ENGINEERING COLLEGE**

**(GOVERNMENT OF GUJARAT)**

**Sector –28, Gandhinagar-382028**

## 1. INSTITUTIONAL BASIC INFORMATION

(Note: Please insert the name of applicant institution and the sub-component number in the footer on each page of the proposal.)

### 1.1 Institutional identity

- Name of the institution : **GOVERNMENT ENGINEERING COLLEGE ,  
SECTOR-28, GANDHINAGAR- 382028,  
GUJARAT.**
- Is the institution AICTE approved? : Yes
- Furnish AICTE approval no. : F.No.06/01/GUJ/ENGG/2004/009 Dated  
May 12,2004
- Type of institution : Govt. Funded
- Status of institution : non autonomous(affiliated to Gujarat Technological  
University)
- Name of Head of Institution : **PROF C. B. Bhatt**  
(Full time appointee)

### 1.2 Academic information:

- Engineering UG and PG programmes offered in Academic year 2015-13

Sr. No	Title of programmes	Level(UG,PG, PhD)	Duration (Years)	Year of starting	AICTE Sanctioned Annual Intake	Total student strength
1	Computer Engineering	UG	4	2004-05	120	501
2	Instrumentation & Control	UG	4	2004-05	120	437
3	E.C.	UG	4	2004-05	120	470
4	Biomedical Engineering	UG	4	2004-05	120	425
5	Metallurgy Engineering	UG	4	2008-09	60	249
6	Information Technology	UG	4	2009-10	60	186
7	Computer Science & Engineering	PG	2	2010-11	18	36
8	Biomedical Engineering	PG	2	2010-11	18	36

- Accreditation Status of UG programmes:

Title Of UG Programmes Being Offered	Whether Eligible For Accreditation Or Not?	Whether Accredited As On 31 <sup>st</sup> March.2015?	Whether “Applied For” As On 31 <sup>st</sup> March.2015?
Computer Engineering	Yes	No	No
Instrumentation & Control	Yes	No	No
E.C.	Yes	No	No
Biomedical Engineering	Yes	No	No
Metallurgy Engineering	No	No	No
Information Technology	No	No	No

- Accreditation status of PG programmes:

Title Of PG Programmes Being Offered	Whether Eligible For Accreditation Or Not?	Whether Accredited As On 31 <sup>st</sup> March.2015?	Whether “Applied For” As On 31 <sup>st</sup> March.2015?
Computer Science & Engineering	-	No-	-No
Biomedical Engineering		No	No

### 1.3 Faculty Status (Regular/ On-Contract Faculty As On March 31<sup>st</sup>,2010)

Faculty rank	No. Of Sanctioned Regular Posts	Present Status : Number In Position By Highest Qualification												Total Number Of Regular Faculty In Position	Total Vacancies	Total Number Of Contract Faculty In Position
		Doctoral Degree				Master’s Degree				Bachelor Degree						
		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines				
R	C	R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15=(3+5+7+9+11+13)	16=(2-15)	17=(4+6+8+10+12+14)
Prof	13	0	0	0	0	1	0	0	0	0	0	0	0	1	12	0
Asso prof	26	1	0	0	0	9	0	0	0	0	0	0	0	10	16	0
Asst prof	72	0	0	1	0	40	0	10	0	0	0	0	0	51	21	0
Total	111	1	0	1	0	50	0	10	0	0	0	0	0	62	49	0

Prof=Professor, Asso Prof =Associate Professor, Asst Prof =Assistant Professor, Lec = Lecturer, R=Regular, C=Contract

## 2. ELIGIBILITY PROPOSAL

The Eligibility Proposals will be evaluated in meeting the “Eligibility Criteria” and capacity for implementation of key reforms.

2.1 Eligibility to be eligible under the Sub-component 1.1 should fulfil the following benchmarks:

**Table-28**

### Benchmarks for Institutions to Qualify for Sub-component – 1.1

Sr. No.	Attainment Parameters	Benchmark values	Institution's response
1	Does the institution agree to implement all academic and non-academic reforms given below : <ul style="list-style-type: none"> <li>• Implementation of Curricular Reforms</li> <li>• Exercise of autonomies</li> <li>• Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund</li> <li>• Generation, retention and utilization of revenue generated through variety of activities</li> <li>• Filling up all existing teaching and staff vacancies</li> <li>• Delegation of decision making powers to senior functionaries with accountability</li> <li>• Improve Student Performance Evaluation</li> <li>• Implement performance appraisal of faculty by students</li> <li>• Provide faculty incentive for Continuing Education(CE), consultancy and R &amp; D</li> <li>• Obtaining accreditation</li> </ul>	Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes
2	Age of the institution from the start of its first academic session (in years) (a) Regular States (b) New States lagging in Technical Education	6 4	8 Years -----
3	Total number of UG and PG programmes currently conducted	4	6 UG+2 PG
4	Faculty positions filled on regular full time basis as percentage of the total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio	50 %	55.85 %
5	Presence of Board of Governors (as per recommended structure given in Section-5) with an eminent Academician or Industrialist as the Chairperson	Yes	Yes

\* 20 % of the total deficit faculties are likely to be filled by GPSC very shortly. GPSC Interviews for same are already in progress.

3. Baseline Data (all data given for the following parameters must be restricted to engineering disciplines/fields only):

Sr. No.	Parameters	2010-11	2011-12
1	Total strength of students in all programmes and all years of study	1966	2265
2	Total women students in all programmes and all years of study	629	746
3	Total SC students in all programmes and all years of study	136	150
4	Total ST students in all programmes and all years of study	152	180
5	Total OBC students in all programmes and all years of study	527	633
6	Number of fully functional P-4 and above level computers available for students	315	315
7	Total number of text books and reference books available in library for UG and PG students	7923	7923
8	% of UG students placed through campus interviews	12	15
9	% of PG students placed through campus interviews	-	-
10	% of high quality undergraduates (>75% marks) passed out	59	62
11	% of high quality postgraduates (>75% marks) passed out	-	60
12	Number of research publications in Indian refereed journals	-	-
13	Number of research publications in International refereed journals	-	-
14	Number of patents obtained	-	-
15	Number of patents filed	-	-
16	Number of sponsored research projects completed	-	-
17	The transition rate of students in percentage from 1st year to 2nd year in the year 2009-10 for: i) All students ii) SC iii) ST iv) OBC	345 10 09 101	392 46 65 113
18	IRG from students' fee and other charges (Rs. In Lakh)	-	18.58
19	IRG from externally funded R & D projects, consultancies (Rs. In Lakh)	-	-
20	Total IRG (Rs. In Lakh)		18.58
21	Total annual recurring expenditure of the applicant entity (Rs. In Lakh)		500

Note: Academic Year for Academic data : July to June

Financial Year for Financial data : April to March

## **4. INSTITUTION DEVELOPMENT PROPOSAL**

### **4.1 Give the Executive summary of the IDP**

Government Engineering College, Sector-28, Gandhinagar, is in possession of very large land area, enabling provision for infrastructural and supplemental development. 6 undergraduate programmes and 2 post graduate programmes are currently being offered, in diversified and specialized streams of engineering. The institute proposes to use its stature of flagship engineering institute of Central Gujarat region, and build up on that, by establishing a nodal center for Engineering education and training. The institute also proposes to develop in to a premier technical consultancy house, by utilizing its strength of technical proficiency with newly developed laboratories, thereby generating Internal Revenue. The institute intends to produce graduates well-groomed for modern day industrial requirements. Encouraging placement scenario in recent years justifies this thrust on placement of the graduates. Emphasis on enhanced and effective industry-institute interaction would serve to build mechanisms for industrial feedback on educational practices, and in turn improve employability of graduates.

The institute would strive for developing and upgrading technical competence and qualifications of its faculty by special focus on ascertaining and providing for training needs in various areas, including managerial, administrative and finance domain, over and above technical knowledge.

The institute looks to enhance efforts in educational measures especially for weaker students, by arranging remedial teaching and objective-specific teaching methodologies, so as to make them become better finished product for industrial needs.

### **4.2 SWOT ANALYSIS OF GOVERNMENT ENGINEERING COLLEGE, GANDHINAGAR**

#### **Preamble :**

With an established reputation as one of the leading engineering institutes of Gujarat state, GEC, Gandhinagar has become the preferred choice for many students willing to pursue a B.E., to build their career as an Engineer.

Government Engineering College, Gandhinagar was established in the year 2004, with an objective of imparting higher education in various fields of engineering and technology. This institute is recognized by All India Council of Technical Education (AICTE), New Delhi and Institute of Engineers (India). The college is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar and is affiliated with Gujarat University.

#### **Method:**

SWOT analysis was carried out by open discussion among Faculty, staff and students . Printed forms were distributed among all of them, with an introduction to the TEQIP II. All the faculties, Supporting Staff and Students were drawn to intensive brain storming sessions.

Faculty- 30, Staff-5, Students-35, Total-70 participated in the exercises. The outcomes are described as under.

### **STRENGTH (S)**

- Located in the capital of Gujarat state in vicinity of Electronics Industrial Estate & Special Economic Zone ( SEZ)
- Very easily accessible by any means of transportation.
- As located in capital and near to mega city good meritorious students take admission to the institute.
- Well connected with other good cities.
- Resource sharing with other government institutions
- Government institution working with nominal fees and free seat for female. Also institute is helping economically weak students through TFW scheme.
- Fully equipped with Campus Wide Networking , with Wi-Fi facility, with dedicated Internet leased line
- Well established telecom infrastructure across the institute
- Qualified, experienced and motivated teaching staff.
- Separate block available for each department, amenity centre, workshop , library and administration.

### **WEAKNESS(W)**

- Shortage of faculty and senior faculty
- Supporting staff are inadequate.
- Insufficient student-faculty ratio
- Being an upcoming institute, intensive interaction with industry is lacking.
- Less administrative and financially power is given to institute head and department head for making effective and efficient system.

### **OPPORTUNITIES (O)**

- Continuous and intensive effort to the higher authority to fulfil shortage of faculty and supporting staff
- Expedite development of infrastructure and laboratories.
- Potential of getting young and energetic supporting staff in accordance with New recruitment rules.
- 4 UG courses are matured to get accredited.

- Establishment of new industries in Gujarat.
- Very good scope for testing & consultancy. More and more tie-ups with industries.
- Good potential ahead due to development and funding in infrastructure sector.
- Resources for research can be developed.
- To form and strengthen the institute Alumni.
- Growing demand of core and intermittent branches the preference should be given to start new UG courses like Civil, Mechanical, Electrical, Environmental Engg etc.

#### **THREATS (T)**

- Fast changing Technological Trends.
- Arrival of Foreign universities with good infrastructure.
- Declining quality of students due to increase in seats.
- Attrition of faculties due to stagnancy in professional career.

#### **4.3 State the general objectives of your proposal and elaborate the specific objectives and expected results in terms of institutional strengthening and improvements in employability and learning outcomes of graduates. These objectives and results should be linked to the SWOT analysis [maximum 2 pages]**

**Institute's Vision :** To impart state of art engineering knowledge to the students by continuous improvement in the existing curriculum and also in the infrastructure facility to make overall growth which will raise the acceptability of the staff and students by the beneficiaries.

#### **OBJECTIVES –**

- To achieve enhanced autonomy in academic, administrative and managerial flexibility.
- To upgrade all laboratories equipped with latest equipment so as to carry out practical and research in related field and to increase number of journals, textbooks, and reference books in the library. To provide exposure to latest software to faculty and students in their related field.
- To strengthen the Institute Alumni Association after its formation.
- To provide training to faculty, technical staff and administrative staff to increase their competency.
- To initiate Post Graduate courses in all the discipline and to provide facilities for consultancy and testing, as per demand of industry and interaction with the specialized industry which can support PG programme? Also to enable Students to get better placement and employability in continuous consultation with industry.
- To make the college ready for accreditation by strengthening facilities of laboratories, library, training of faculty and improvement in qualification of faculty.
- Continuous efforts to fulfil the vacant post of teaching and non-teaching staff.



- Establish research and development skills and impart among the teachers.

#### **4.4 Provide an action plan to achieve the desired results and implement the institutional project. maximum 2 pages]**

##### **a) Improving employability of graduates**

- The institute proposes bring about modernization in the laboratories, laced with modern software in various departments of EC, Computer, IT, Metallurgy, Biomedical, IC, in UG and PG. Updated Syllabus with Modern laboratory set up will go a long way in improving industry readiness of the graduates.
- The institute proposes to develop a continuing Education cell to cater to co-curricular needs of the students. Also, it can be used for other stake holders.
- The institute proposes to take up an industry survey to ascertain areas in which training is desired by the faculty, and in turn, train them in those areas at institutes/ industries of repute in the country. This will shape up better outcome of the teaching and research.
- The institute's focus is on enhancement of fortifying placement activity, and has greater participation of industries personnel for the curriculum reforms and pedagogy.

##### **b) Increased learning outcomes of the students**

- The institute has carried out an exhaustive in-house Training Needs Analysis. By sticking to the on-going reforms in teaching methodologies and by planning inhouse and off-institute pedagogical trainings for the faculty, institute proposes to improve the teaching and thereby improve the learning outcome of the candidates.
- The institute proposes to update laboratories for UG and PG programmes, to enable students become receptive and trained for the latest technology.
- The institute looks to improve subject knowledge and research competence, for sending more and more faculty for qualification up gradation.
- Also, institute proposes to train more technical supporting personnel in pertinent areas.
- The institute proposes to strengthen the institute library, by purchasing latest learning materials, in terms of books, journals and technical magazines. Institute is already encouraging students to use the e-library through sophisticated campus-wide networked leased line for internet communication.

##### **c) Obtaining autonomous institution status within 2 years**

The institute is a fully-owned Government of Gujarat institute, under the Commissioner ate of Technical education, under the department of education. The institute will apply for academic autonomy. The institute has created bodies/authorities/ councils to run the academic functions at the institute.

The institute will apply to the State Government through the directorate for attaining administrative autonomy, and will adopt appropriate administrative structures, policies and

procedures. The institute will strive for generating internal revenue for obtaining financial autonomy.

**d)** Achieving the targets of 60% of the eligible UG and PG programmes accredited within two years of joining the Project and 100% accreditation obtained and applied for by the end of the Project of the eligible UG and PG programmes The institute has applied for accreditation of all eligible UG programmes, and the process of scrutiny is on. The institute will apply for accreditation of its PG programmes on becoming eligible to apply.

**e) Implementation of academic and non-academic reforms (details given in Annex-I to PIP)**

- The institute will strive for attaining administrative and managerial autonomy through the directorate. Institute proposes to boost up its IRG by means of continuing education programmes, Consultancy and industry-based research projects. The institute is already observing academic autonomy.
- The institute is having participation of key stake holders in the governance.
- The institute proposes to involve BoG for the use of block grant, with a power to allocate/re-allocate block grant to expenditure categories except head “Salaries”, in the best interest of the institute.
- The institute proposes to establish four funds (Corpus fund, Faculty development Fund, Equity replacement Fund, and Maintenance fund) to ensure sustainability of the reform process beyond the project period.
- The institute proposes to motivate faculty to contribute to IRG by means of participation in consultancy projects, research projects and custom-made Continuing Education Programmes.
- The institute proposes to apply to the government for filling-up faculty and staff vacancies.
- The institute will adopt apt student performance evaluation measures, and formative performance up gradation, by employing improvement focused reforms. Institute proposes to employ two summative evaluations each semester.
- The institute already has performance appraisal of faculty by students in place. Faculty has been taken in confidence, and care has been taken in designing appraisal instruments, in order to eliminate faulty or casual assessment. Benchmarks from IIT-system feedback measures has been followed and have been suitable adopted.
- Faculty is encouraged and suitably rewarded by recognition and other financial means for Continuing Education, Consultancy, R & D. Also, faculty and staff members’ academic and other progression goals are identified, thereby creating greater opportunity for academic and professional growth for deserving faculty and staff.

**f) Improving interaction with industry**

- By having industry personnel on panel for curriculum revision, the institute keeps a live contact with the industrial requirements. Inputs from industries' personnel add to industry-institute interaction.
- Institute proposes to develop mechanism to involve extra-mural classes for UG and PG students by drawing faculty from industries, in pertinent areas.
- Institute proposes to increase Industry-institute Interaction by involving PSAG (Public sector Advisory Group) in curricular and co-curricular affairs.
- The institute proposes to arrange tutoring by industrial experts to prepare students for on and off-campus interviews.
- Faculty is encouraged and suitably rewarded by recognition and other financial means for Continuing Education, Consultancy, R & D with industries.

**g) Enhancement of research and consultancy activities**

- The institute proposes to recognize contribution and performance of faculty and staff in Internal Revenue Generation and knowledge dissemination activities like Continuing Education, Consultancy, R & D, through awards, rewards, promotions. Measures are being established to see that due freedom is given to utilize part of earnings to develop office and library facilities, purchase of literature and attendance of conferences.
- Institute proposes to motivate deserving faculty for personal academic research and travel for attending conferences/ research institutes and other Scientific and Technology Entrepreneurship Programme (STEP).

4.5 Provide an action plan for organising a Finishing School and for improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes for increasing the transition rate and pass rate with the objective of improving their employability.

- The institute has been conducting an exercise of Wide- classrooms for remedial teaching for weaker students, by using advanced teaching-learning methods, where a large mass of students are encouraged to correct their weak areas, thereby improving their results and decreasing failure rates. Faculty is encouraged to take up bridging courses, remedial teaching classes and skill-development training.
- A special thrust is being given to provide specialized training in soft components like communication- presentation skills, Personality development, resume preparation etc. The institute proposes to involve more outside faculty to provide professional touch to these learning skills, so that it ultimately results in improving student's employability.

4.6 Provide an action plan for strengthening of PG programmes and starting of new PG programmes.

- The institute proposes to upgrade laboratory and research facilities at UG and PG levels.
- The institute proposes to involve industrial training component at UG and PG level curricula.
- The institute proposes to apply for launching new PG programmes at the institute.

4.7 Attach a summary of Training Needs Analysis carried out. Also, provide Faculty Development Plan for the first 18 months for improving their teaching, subject area and research competence based on Training Needs Analysis (TNA) (see Annex.VI to PIP) in the following areas.

- Basic and advanced pedagogy
- Subject / domain knowledge enhancement
- Attendance in activities such as workshops, seminars
- Improvement in faculty qualifications
- Improving research capabilities

A detailed TNA was carried out in the organization, wherein the objective of the said analysis was discussed in separate gatherings with Heads of the departments, various section heads, and representation of administrative and finance staff, and Class-IV staff. In a brain storming session, the Principal, academic and administrative heads, faculty, and other representatives chalked out their training needs, concurrent with the established Vision and mission of the institute. While participants were encouraged to identify their training needs areas, suggestions were sought from Industries' representatives to list out areas in which faculty, staff and authorities need to be trained. All the participants were distributed prescribed formats for TNA which were further distributed and filled-up by faculty and staff of their respective department.

Principle areas which were identified are listed in the table below:

Sr. No.	Personnel	Core TNA areas identified
1	Principal of the institute	Institutional Development and Management, Planning and Implementation, Budgeting and Financial Management, Extension of services, Exposure to premiere institutions/Centres of Excellence (National and International), Sustainability strategy, Etc.
2	Heads of the departments (Teaching)	Personality development, Communication skills, Attitudinal and mind.set change, Motivation, Qualification upgradation, Effective teaching ;V learning (pedagogy) processes, Advanced subject knowledge, Advanced R&D activities, Lab / workshop development, Attachment to industry and premiere R&D organizations, consultancy, Planning and Implementation, Budgeting Financial Management, Management Capacity Development, Etc.
3	Faculty (including contractual and ad.hoc)	Attitudinal and mind.set change, Personality development, Communication skills, Motivation, Qualification upgradation, Effective teaching ;V learning (pedagogy) processes, Advanced subject knowledge, Advanced R&D activities, lab/workshop development, Quality management, Standard conferences, consultancy, Etc.
4	Technical Staff	Attitudinal and mind.set change, Personality development, Communication skills, Motivation, Qualification upgradation, Operation and Maintenance of modern laboratory and advanced equipment, Advance learning in their relevant occupational areas, Etc.
5	Support Staff	Attitudinal and mind.set change, personality development, communication skills, motivation, office modernization, qualification up gradation, advance learning in their relevant occupational areas
6	Administrative Staff (including finance personnel)	Attitudinal and mind.set change, Personality development, Communication skills, Motivation, Qualification upgradation, Institutional Development Management, Quality Management, Management Information System Planning and Implementation, Budgeting and Financial Management, Systems Automation, Human Resource Management, Etc.

	Class IV Staff	Attitudinal and mind.set change, personality development, motivation, qualification upgradation
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- 18-month Faculty Development plan

Sr. No.	Faculty Domain	Type of training	Duration (Slot)	Institute/Organization/ Industries
1	Metallurgy	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification upgradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ IIM/ BHU/ National institutes of research, Software training institutes, Regional and national industries of repute.
2	Biomedical	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification upgradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Software training institutes, Regional and national industries of repute.
3	Electronics and communications	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification upgradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Disaster Management centers, Software training institutes, Regional and national industries of repute.
4	IC	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification upgradation, Participation in National/International	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Software training institutes, Regional and national industries of repute.

		Conferences/ Workshop		
5	Computer	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification up gradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Software training institutes, Regional and national industries of repute.
6	Information Technology	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification up gradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Software training institutes, Regional and national industries of repute.
7	Civil and Applied Mechanics/ Electrical/ Mechanical Engineering/ Humanities	Basic and advanced pedagogy, Subject domain knowledge enhancement, alification up gradation, Participation in National/International Conferences/ Workshop	Starting June 2013 for the periods ranging from 2 weeks to 18-months	IITs/IISc/NITs/ National institutes of research, Disaster Management centers, Software training institutes, Regional and national industries of repute.

4.8 Provide an action plan for training technical and other staff in functional areas.

Sr. No	Department	Type of training	Duration (Slot)	Institute/Organization/ Industries
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1	Technical and other staff of Metallurgy	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute
2	Technical and other staff of Biomedical	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute
3	Technical and other staff of Electronics and communications	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute
4	Technical and other staff of IC	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute
5	Technical and other staff of Computer	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute



		methodologies, Attitudinal workshops	weeks	
6	Technical and other staff of Information Technology	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute
7	Technical and other staff of Civil and Applied Mechanics/ Electrical/ Mechanical Engineering/ Humanities	Advances in laboratories and equipment, Computerization, software training, pedagogic demonstration methodologies, Attitudinal workshops	Starting June 2013 for the periods ranging from 2 weeks to 4 weeks	NITs, Institutes of region, ITIs, Regional institutes and industries of repute

4.9 Describe the relevance and coherence of Institutional Development Proposal with State's/National (in case of CFIs) Industrial/Economic Development Plan.

State of Gujarat is shaping in to a leading state as far as industrial growth and corresponding infrastructure like land/water/power/ roads are concerned. With more and more national and international industrial houses coming to Gujarat, there is ever-increasing need for Engineering institutes capable of transpiring education in to relevant industrial needs. With Government Engineering College aspiring to fulfill this techno-managerial and educational dearth of skilled manpower by improving employability and educational outcomes, it is in line with the thrust on industrial development policy prevalent in the state.

4.10 Describe briefly the participation of departments/faculty in the IDP preparation.

The Principal of the institute chaired a meeting of various heads of the departments, briefing the objective of IDP preparation in context of TEQIP-II. The institute had already identified Project co-ordinators of the level of Head/ Senior Class-I officers, working with TEQIP co-ordinator of the institute since the IEP preparation and SWOT analysis. Senior faculty from Industrial/ Production/ Electrical departments were drawn to work in sync with the project co-ordinators for the preparation of IDP.

4.11 Describe the Institutional project implementation arrangements with participation of faculty and staff.

The institute, ably headed by the Principal, has chalked out various reforms committee at the institute, in areas like

- Academic reforms, headed by senior professors from different departments, consisting of mix of senior and young faculty.
- Administrative reforms, headed by Administrative officer and assisted by senior administrative staff
- Governance, headed by administrative head and representation from Heads of various departments. Other stake holders are also involved in general governance.
- The institute proposes to establish four funds (Corpus fund, Faculty development Fund, Equity replacement Fund, and Maintenance fund) to ensure sustainability of the reform process beyond the project period.
- The institute has formed TEQIP committee comprising of The Principal, TEQIP Coordinator, and project nodal officers for Academic activities, Civil works including environment management, Procurement, Financial aspects, Equity Assurance Plan implementation.

4.12 Provide an Institutional project budget in Table.29.

**Table-29**

**Institutional project budget for sub-component 1.1**

Sr. No.	Activities	Project Life allocation	(Rs. In Crore)		
			2015-13	2013-14	2014-15
1	Infrastructure improvements for teaching, training & learning through				
	i) Modernization and strengthening of laboratories	10 years	0.25	0.25	0.25
	ii) Establishment of new laboratories for existing UG and PG programmes and for new PG programmes	10 years	0.50	0.50	0.50

	iii) Modernization of classrooms (Continuing Education Center cum Placement Cell)	15 years	0.20	0.20	0.20
	iv) Updation of learning resources	10 years	0.125	0.125	0.125
	v) Procurement of furniture				
	vi) Establishment/Upgradation of central and departmental computer centers	5 years	0.50	0.50	0.50
	vii) Modernization/Improvement of supporting departments	10 years	1.00	1.00	1.00
	viii) Modernization and strengthening of libraries and increasing access to knowledge resources	10 years	0.125	0.125	0.125
	ix) Refurbishment (Minor civil work)	10 years	0.06	0.06	0.06
2	Providing teaching and research assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines	10 years	0.125	0.125	0.125
3	Enhancement of R & D and institutional consultancy activities	10 years	0.75	0.75	0.75
4	Faculty and staff development (Including faculty qualification upgradation, pedagogical training, and organizing/participation of faculty in	10 years	1.00	1.00	1.00

	workshops, seminars and conferences) for improved competence based on TNA				
5	Enhanced interaction with industries	10 years	0.50	0.50	0.50
6	Institutional management capacity enhancement	10 years	0.125	0.125	0.125
7	Implementation of institutional reforms	10 years	1.00	1.00	1.00
8	Academic support for weak students under the aegis of finishing school	10 years	0.20	0.20	0.20
9	Technical assistance for procurement and academic activities	5 years	0.125	0.125	0.125
10	Incremental Operating cost	10 years	0.125	0.125	0.125
Total			6.71	6.71	6.71

4.13 Provide the targets against the deliverables listed in Table -30

**Table -30**

**Project targets for institutions under sub-component 1.1**

Sr. No	Deliverables	Baseline	Targets to be achieved	
			At the end of 2- years of joining the project	By project closing
1	Number of students registered for (a) Master of Engineering programme (b) Doctoral programme in Engineering	36 03	54 06	72 10
2	Revenue from externally funded R & D projects and	----	5.0	10.0

	consultancies in total revenue (Rs. In Lakhs)			
3	Number of publications in referred journals (a) National (b) International	5 3	10 10	15 15
4	IRG as % of total annual recurring expenditure	3	5	10
5	Number of co-authored publications in referred journals (a) National (b) International	5 3	10 10	15 15
6	Student credentials (a) campus placement rate of <ul style="list-style-type: none"> <li>• UG students</li> <li>• PG students</li> </ul> (b) Average salary of placement package for (Rs. In lakh) <ul style="list-style-type: none"> <li>• UG students</li> <li>• PG students</li> </ul>	12 % -	30 % 20 %	60 % 50 %
7	Number of collaborative programmes with industry	5	7	10
8	Accreditation status (obtained and applied for)	Yet to obtain	Minimum 50 % of UG + PG	100 % of UG + PG

9	Vacancy position for faculty and staff	45 %	10 % or less	5 % or less
10	Percentage of regular faculty having a masters degree or a doctorate degree in engineering disciplines	95 %	100 %	100 %
11	Transit rate from 1st to 2 <sup>nd</sup> year for the following: <ul style="list-style-type: none"> <li>• All students</li> <li>• SC and ST students</li> <li>• OBC students</li> <li>• Women students</li> </ul>	95 % 90 % 90 % 95 %	97 % 93 % 93 % 97 %	99 % 95 % 95 % 99 %
12	Autonomy status	Required to be obtained	Under finalization stage	Obtained
13	Enrolment of faculty with only bachelor degree for qualification upgradation	10%	5 %	0 %
14	Any other academic deliverables (Maximum 3)	---	-----	-----
(i)	Continuing Educational Programmes on personality development	5	10	20
(ii)	Continuing Educational Programmes on Soft skill Development	5	10	20
(iii)	Sports and extra curricular activities	5	15	20

4.14 Give an action plan for ensuring that the project activities would be sustained after the end of the project.

- The institute is fully funded by the Government for meeting expenses under different heads.

The institute will ensure sustainability of the project beyond the block grant period by creation of Four funds, namely

- Corpus fund
  - Faculty Development fund
  - Equipment replacement fund, backed by suitable replacement policy
  - Maintenance fund
- 
- The institute shall have different bank accounts for these funds, and it will be ensured that these funds are not used during the project period, as funds for various activities are available under the project.
  - The institute shall ensure to build these funds equivalent to atleast 0.5 % of total annual recurring cost of the institute, and its sources would have a definite percentage of fees collection, block grant, IRG through research projects and consultancies, etc.
  - 4.15 Provide a procurement plan for the first 18 months for goods and civil works in Table-31 and consultant services in Table-32 with budget and time frame.

**Table-31**

**18- Month procurement plan for works and goods for sub-component 1.1**

Name of the institution with location: Government Engineering College, Sector-28, Gandhinagar, Dist. Gandhinagar, Gujarat state

Package No.	S.N	Activities	Description of works/goods	Estimated cost (Rs.)	Method of procurement	Design/Investigation/Completion/Specification finalization date	Estimate sanctioned (Date & value)	Preparation of bid document (Date)	Receipt of Bank's No objection to Bidding Document (Date)	Bids		Contract awarded (Date / Value)	Date of completion of contract
										Invitation (Date)	Opening (Date)		
24		Building a Continuing Education Cell cum placement cell	Civil Work	50.00 Lacs	Rate Contract	August-2013	Sept.-2013	Oct-2013	N. A.	Nov-2013	Nov-2013	Dec-2013	Dec-2014
		Purchase of MATLAB 10 users license software for all departments UG and PG courses	Equipment purchase	6.50 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of Software for EC	Equipment purchase	10.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of Software for IT	Equipment purchase	15.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of Software for CE		15.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of Software for IC		10.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of equipment and		50.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014



		Software for Material testing laboratory for applied mechanics department											
		Purchase of equipment and Software for Language laboratory		10.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of equipment and Software for Metallurgy Engineering		25.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014
		Purchase of equipment and Software for Biomedical		20.0 Lacs	Competitive Bidding	Aug-2013	Sept-2013	Oct-2013	N.A.	Nov-2013	Nov-2013	Dec-2013	Mar-2014

Table-32

**18- month procurement plan for consultant services for sub-component 1.1**

Name of the institution with location: Government Engineering College, Sector-28, Gandhinagar,  
Dist. Gandhinagar, Gujarat state

Sl. No.	Activities	Description of services	Estimated cost (Rs.)	Method of selection	TOR finalization date	Advertisement (Date)	RFP final draft to be forwarded to the bank (Date)	No Objection from the bank for RFP (Date)	RFP Issued (Date)	Proposals received (Date)	Evaluation (Date)	No Objection by the bank (Date)	Contract value and Date of award	Contract Completion date
1	Mapping of available resources, finalization of requirement, preparation of bid document and all other activities related to the procurement	Survey of available And required resources for the different dept of the institute	1.5 Lacs	EOI cum RFQ	1-3-13	1-4-13	1-6-13	1-6-13	1-4-13	1-5-13	15-5-13	16-6-13	1-7-13	31-1-15

4.16 Provide any other information related to special academic achievements as given in the eligibility proposal of the institute

- The institute facilitated 12% on-campus placements in 2011, despite difficult industrial scenario during the times of global recession.
- The intakes in various UG disciplines have been increased to almost double the previous year's intake.